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S. G. NORMAN

DRAWER LOCK FOR DESKS AND CABINETS

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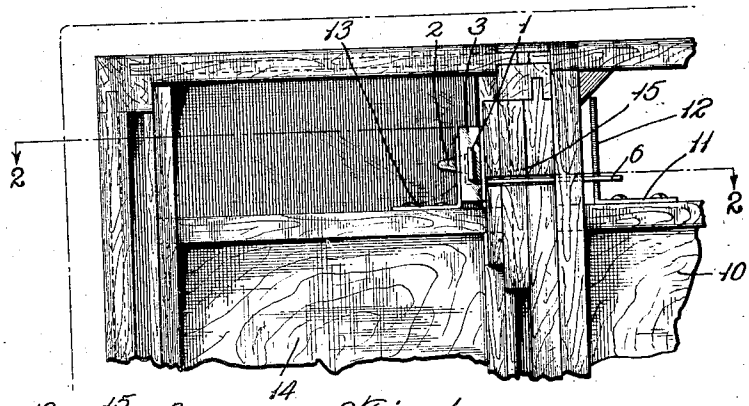


Fig. 1.

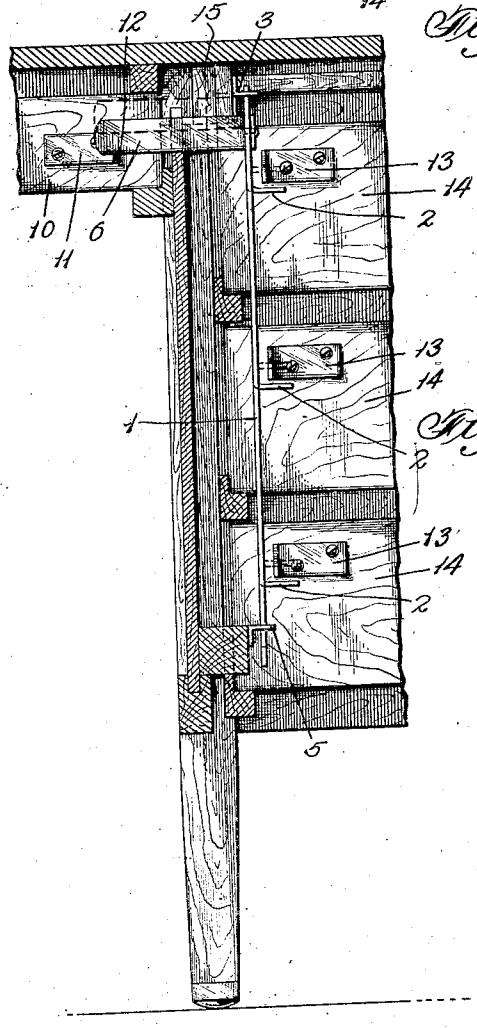


Fig. 2.

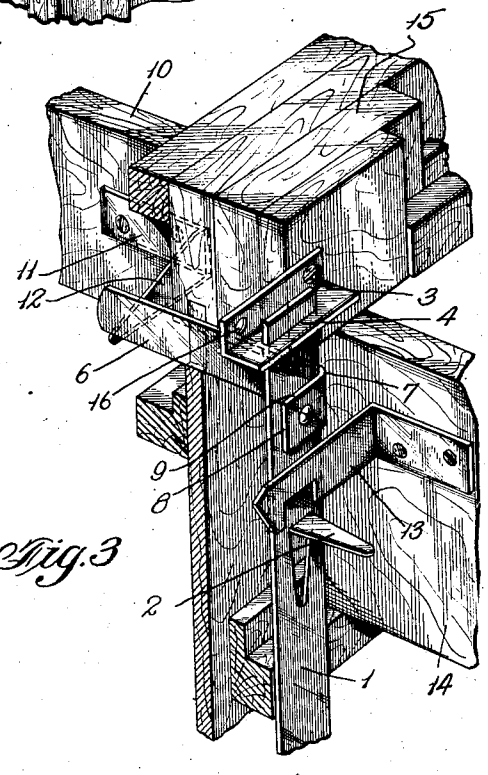


Fig. 3

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UNITED STATES PATENT OFFICE.

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DRAWER LOCK FOR DESKS AND CABINETS.

Application filed March 7, 1925. Serial No. 13,805.

My invention relates to new and useful improvements in drawer locks for desks and cabinets, and more particularly to a lock for the drawers that is so arranged that the latch lift will be prevented from canting or tipping while being operated to thus provide a lock arrangement which will give long and constant service.

Although the invention is shown as built in a sanitary type of desk it will be understood that the locking mechanism is so constructed that it will operate just as well with the old fashion roll top desk.

In a number of the different arrangements of locks for desk drawers, the various parts, from constant use, become loose or worn and the drawers are apt to be locked when they should be unlocked, and on the other hand, fail to lock when they are supposed to lock.

One of the objects, therefore, of the present invention, is to so construct a locking means and to so arrange the same that the horizontal latch bar, which is attached to the vertical lock strip will be so mounted in the desk that it will be rigidly supported against canting or tipping, or in other words, will be guided in its upward and downward movement along its opposite side, thus providing a strong and rigid construction, and one which will give good service and constant service for a number of years.

Still another object of the invention is to provide a locking means and so arrange the same with relation to the drawers, that a portion of the upper part of the lock acts as a stop, so that when the vertical lock strip on which projects the tongue fitting within the catch, is moved upwardly, its limit of upward movement will be regulated by the upper portion of the lock, thus relieving the strain on the tongues and the catches on the drawers.

Still another object of the invention is to so arrange the lock that the catches on the drawers may be set away from the edge of the drawers, and at the same time the horizontal latch bar which operates the vertical lock strip will be held against a canting or tipping which would soon weaken the different parts of the locking means.

Still another object of the invention is to provide a lock for the drawers which may be quickly and easily assembled, relatively cheap to manufacture and simple in operation.

With these and other objects in view, the invention consists in certain new and novel constructions and combination of parts as will be hereinafter more fully described and pointed out in the claims.

Referring now to the drawings showing a preferred embodiment of my invention,

Fig. 1 is a fragmentary top plan view of a desk pedestal, showing a portion of a center drawer and the locking arrangement for the several drawers in the pedestal.

Fig. 2 is a fragmentary sectional view taken on the line 2—2 of Fig. 1, the dotted line showing the position of the horizontal latch bar of the locking means, and

Fig. 3 is a fragmentary perspective showing the locking means cooperating with a catch on one drawer.

At the outset it might be mentioned that the desk shown in the drawing is of the sanitary type wherein there will be two pedestals (one only being shown) over which there is placed a top having the usual center drawer and the locking means operated from the opposite sides of the center drawer, and as the locking means and pedestals are the same in both instances, (the latch bars extending in the opposite directions) a description of one is a description of the other.

Referring now to the lock and then to its arrangement, there is shown a metal vertical lock strip 1 which may be of iron or steel from which extend the tongues 2, preferably stamped from the strip and extending at right angles thereto, the strip 1 being relatively wide and thin in section. At the upper end of this strip, is a plate 3 which is preferably angular and provided with a slot 4 while a similar plate 5 forms the bearing for the lower end of the strip, this plate 5 being inverted with respect to the other plate. Securely riveted to the strip 1 and near its upper end, is the horizontal latch bar 6 which is also relatively large in width and is bent at right angles to itself as at 7, so that the inner end thereof 8 may be tightly riveted to the bar 1. The point at which this latch bar 6 is riveted is of importance as its upper edge 9 at the inner end 8 is adapted to contact with the lower edge of the plate 3 when the vertical bar 1 has been raised to its proper upper limit.

Secured to the rear end of the center drawer 10 is a metal plate 11 having the

right angular portion 12 which I term a "latch lift," and it will be seen that this latch lift is adapted to engage the under edge of the latch bar 6 as the drawer approaches its innermost limit, whereas a continued inner movement of the drawer will force the latch bar 6 upwardly along the angular incline of the latch lift 12, the width at the rear of the latch lift determining the upward limit of movement of the latch bar 6 and naturally the locking strip 1. The plate 3 also limits the upward movement of the strip 1. On the rear of each drawer is a catch 13 which is adapted to be engaged by a tongue 2 on the vertical strip 1.

As far as the specification has proceeded, it will be seen that when the drawer 10 is forced inwardly, the vertical lock strip 1, through the medium of the latch lift 12 and latch bar 6 will cause the tongues 2 to engage the catches 13 which are secured respectively to the rear ends of the drawers 14, thus locking all of the drawers when the center drawer 10 is in its normal or closed position.

An outward movement of the drawer permits the strip 1 to fall by gravity and thus unlock the several drawers.

Now the arrangement of this locking mechanism with regard to the drawers is of importance in that reinforcing means are provided for presenting a maximum surface to the opposite sides of the latch bar 6 to prevent it from canting or tipping, as not only is a slot cut through the panel or side of the pedestal, but additional slotted strips 15 are provided which are nailed and glued to the desk side, so that the latch bar 6 extends through a slot substantially from its one end to the other. When the center drawer is pushed inwardly and outwardly, therefore, the latch bar 6 is raised and lowered and at the same time prevented from canting by the walls of the slot in the panel and reinforcing strip just mentioned.

The vertical lock strip 1 is adapted to project beyond the upper surface of the plate 4 so that it might be operated by a "roll top" and a small hole 16 is shown in one corner of this plate to which might be attached a spring, (not shown) to the roll top.

From the foregoing it will be seen that I have provided a drawer lock wherein the several parts are formed of metal and wherein the movement of these cooperating parts will present a metal-to-metal surface to thereby provide against wear and to provide ease of operation.

Furthermore, the latch bar is securely riveted to the locking strip and is relatively wide so that it can take up the strain throughout its width at the same time it is prevented from lateral strains or canting by operating in the long slot in the side panels and reinforcing strips, thus providing a rigid construction for the entire locking mechanism.

The way the reinforcing strips are built into the desk for supporting drawer guides, etc., forms the subject matter of a separate companion application.

I am aware that it is old in the art to provide a locking strip and a latch and means for raising the same, and I do not claim the invention broadly as such, but what I do claim, however, and desire to secure by Letters Patent is:—

In a desk, a pedestal, a plurality of side drawers in said pedestal, a center drawer adjacent the side drawers, reinforcing strips along the one side of the pedestal, the reinforcing strips and the side of the pedestal having a slot therein, a latch bar vertically movable in said slot and prevented from canting substantially throughout its length by the side walls of said slot, a bearing plate secured to one of said reinforcing strips and a vertical lock strip operable in said plate, the latch bar being bent at right angles at its inner end and secured to said lock strip, the said plate contacting with said latch bar when the same is raised to its uppermost limit, a bearing for the lower end of said lock strip, catches secured to the rear of the side drawers and tongues on said lock strip adapted to engage the catches when the locking strip is raised, an angular plate secured to the rear of the center drawer for forcing said latch bar upwardly to lock the drawers, and said latch strip dropping by gravity to unlock the drawers when the center drawer is pulled outwardly.

In testimony whereof I affix my signature.

SAMUEL G. NORMAN.